



The Science Zone
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TheScienceZone.org

Science Challenge: Crystal Growing

Question: How can you make crystals at your own home?

Activity: Growing Crystals

Video Link: <https://www.youtube.com/watch?v=5Vr9MVleTcY&list=PL4U0vRPn1WiR50amfEfdzo00li-FIcOfa&index=54>

Materials:

- Water
- Baking Soda
- Food Coloring
- 2 glass jars or cups of equal size and shape
- 2 Paper Clips
- Yarn or String
- Scissors
- Spoon
- Plate

Procedure:

Have an adult help you with steps 1 & 2 as hot water can burn your skin.

1. Boil 2 cups of water on the stove.
2. Once the water has boiled, pour it into a large heat-resistant bowl, or kettle.
3. Add 1/8 a cup of baking soda to the hot water and stir with a spoon.
4. Continue adding baking soda one teaspoon at a time stirring and completely dissolving each scoop.
 - a. Continue adding baking soda until no more can dissolve in the water.
 - b. You'll see a thin layer of baking soda on the bottom of the bowl.
5. Once your solution is super-saturated (can't hold anymore baking soda) set the bowl aside and let it cool for approximately 25 minutes.
6. When your solution has cooled, pour your solution into your two glass jars. Dividing the solution equally in each container.
 - a. Leave the undissolved baking soda in the original container to be discarded in the trash.
7. Find a spot in your home where you can safely store your project for one week where it won't get bumped or disturbed.



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8. Move your jars to that spot, placing them roughly five inches apart from each other.
9. Set your plate between the jars to catch any spills and drips that may occur.
10. Add food coloring to the jars.
 - a. Get creative and make each jar a different color. Add a few drops (6 to 12) of food coloring and stir it around to mix the color into your solution.
11. Cut a piece of string or yarn 12 inches long
12. Tie a paperclip to each end of the string
13. Gently place each end of the string (with paperclip) into each jar
14. Be sure to let the string hang gently between each jar slightly

Observe

1. Over the next few days observe your crystals form along the string.
2. Take notes, pictures, or draw what you observe.
 - a. Is there a side that grew faster than another side?
 - b. Was there enough accumulation to create stalactities?

Take it Further

Now that you've created your baking soda crystals, you can experiment with other salts, like epsom salt, table salt, borax, and more!

Have fun, and stay curious out there!

